

CD48 (MEM-102): sc-51558

BACKGROUND

CD48 is a GPI-anchored glycoprotein that may act as a low affinity receptor for CD2. CD48 is expressed on all peripheral blood T, B and null cells, thymocytes, eosinophils, a portion of bone marrow cells and some epithelial cells. Rat CD48 is found on hematopoietic and endothelial cells, and mouse CD48 is found on thymocytes, lymph node cells, most macrophages and bone marrow cells. CD48 has been shown to be associated with the tyrosine kinase Lck.

REFERENCES

1. Vaughan, H.A., et al. 1983. Hu Ly-M3 — a human leukocyte antigen. *Transplantation* 36: 446-450.
2. Arvieux, J., et al. 1986. MRC OX-45 antigen: a leucocyte/endothelium rat membrane glycoprotein of 45 kDa molecular weight. *Mol. Immunol.* 23: 983-990.
3. Arvieux, J., et al. 1986. Monoclonal antibodies against a rat leucocyte antigen block antigen-induced T-cell responses via an effect on accessory cells. *Immunology* 58: 337-342.
4. Bazil, V., et al. 1989. Monoclonal antibodies against human leukocyte antigens. III. Antibodies against CD45R, CD6, CD44 and two newly described broadly expressed glycoproteins MEM-53 and MEM-102. *Folia Biol.* 35: 289-297.
5. Knapp, W., et al. eds. 1989. *Leucocyte Typing IV*. New York: Oxford University Press.
6. Korinek, V., et al. 1991. The human leukocyte antigen CD48 (MEM-102) is closely related to the activation marker Blast-1. *Immunogenetics* 33: 108-112.
7. Garnett, D., et al. 1993. The association of the protein tyrosine kinases p56^{lck} and p60^{lyn} with the glycosyl phosphatidylinositol-anchored proteins Thy-1 and CD48 in rat thymocytes is dependent on the state of cellular activation. *Eur. J. Immunol.* 23: 2540-2544.
8. Katsuura, M., et al. 1994. Increased expression of CD48 on neutrophils activated in childhood patients with aplastic anemia. *Int. J. Hematol.* 60: 281-285.

CHROMOSOMAL LOCATION

Genetic locus: CD48 (human) mapping to 1q23.3.

SOURCE

CD48 (MEM-102) is a mouse monoclonal antibody raised against Burkitt's lymphoma human cell line Raji.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

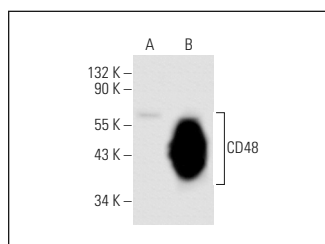
CD48 (MEM-102) is recommended for detection of CD48 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for CD48 siRNA (h): sc-35008, CD48 shRNA Plasmid (h): sc-35008-SH and CD48 shRNA (h) Lentiviral Particles: sc-35008-V.

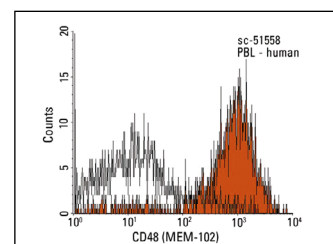
Molecular Weight of CD48: 43 kDa.

Positive Controls: CD48 (h2): 293T Lysate: sc-175059 or Jurkat whole cell lysate: sc-2204.

DATA



CD48 (MEM-102): sc-51558. Western blot analysis of CD48 expression in non-transfected: sc-117752 (A) and human CD48 transfected: sc-175059 (B) 293T whole cell lysates.



CD48 (MEM-102): sc-51558. Indirect FCM analysis of human peripheral blood leukocytes stained with CD48 (MEM-102), followed by PE-conjugated goat anti-mouse IgG₁: sc-3764. Black line histogram represents the isotype control, normal mouse IgG₁: sc-3877.

SELECT PRODUCT CITATIONS

1. Rocha-de-Souza, C.M., et al. 2008. Human mast cell activation by *Staphylococcus aureus*: interleukin-8 and tumor necrosis factor α release and the role of Toll-like receptor 2 and CD48 molecules. *Infect. Immun.* 76: 4489-4497.
2. Margraf-Schönfeld, S., et al. 2011. Glycosylation affects ligand binding and function of the activating natural killer cell receptor 2B4 (CD244) protein. *J. Biol. Chem.* 286: 24142-24149.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.